ER-6: Reduce Oceanic Separation

- *Separation Standards Factors.* Separation standards in a given airspace are a function of the communication, navigation, and surveillance capabilities available in a specific operating environment. Safety analysis and operational judgement consider factors such as: timeliness and reliability of controller-pilot communications, accuracy of aircraft navigation, the controller's ability to determine potential separation loss, aircraft traffic density, and procedures for contingencies such as engine failure and weather deviations.
- *RNP Concept*. The Required Navigation Performance (RNP) concept has been introduced in Pacific operations to standardize navigation. For example, RNP-10 approved aircraft are equipped with navigation systems that can navigate within 10 miles of desired position with 95% probability.
- *Current Separation Standards.* Currently, the minimum lateral separation applied by the FAA is: 120 nm in Atlantic and Caribbean/South American airspace, 60 nm in North Atlantic minimum navigation performance specification airspace, 50 nm between RNP-10 approved aircraft in Pacific airspace except in the Central Pacific where, due to convective weather, 100 nm lateral is applied south of 30N.

  Conventional longitudinal separation is 10 minutes (approximately 80 nm). 50 nm longitudinal separation is currently applied by South Pacific air traffic service providers having enhanced CNS/ATM systems, to aircraft approved for Controller Pilot Data Link Communications (CPDLC) and RNP-10 (10 nm/95% probability).
- *Current Deployment of ADS-A Systems.* Air Traffic Service Providers in New Zealand, Australia, and Tahiti use Automatic Dependent Surveillance-Address (ADS-A) systems in Pacific oceanic airspace. In addition, Fiji plans to deploy an ADS-A system in 2001 and a similar system is under operational testing in Tokyo oceanic airspace.
- *Status of Aircraft System Approvals*. The FAA and other civil aviation authorities have certified ADS-A, CPDLC and RNP capabilities on aircraft such as the B-747-400, B-777 and the A-340.